APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,977	10/11/2001	Yoon Kean Wong	PALM-3697	2943

7590	09/09/2004

WAGNER, MURABITO & HAO LLP
Third Floor
Two North Market Street
San Jose, CA 95113

EXAMINER
BRANT, DMITRY

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	09/976,977	WONG, YOON KEAN
Office Action Summary	Examiner	Art Unit	
	Dmitry Brant	2655	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 October 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-34_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-34_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Thelen et al. (6,487,534).

As per claim 1, Thelen et al. disclose the following limitations:

- Accessing user input (740, FIG. 7)

- Performing coarse recognition on device (local recognizer, Col. 3, lines 1-
  3)

- Performing detailed recognition (remote recognizer, Col. 3, lines 1-3)

- Performing comparison between coarse and detailed results (selector
  makes the final choice between local and remote recognizers, Col. 3, lines
  10-13)

Thelen et al. do not disclose that a client station is a mobile device. However,

Thelen et al. does disclose that a client station is a general computer, of a type including

laptops, PDAs, etc. (Col. 9, lines 63-65). The examiner takes the official notice that

wireless computers are extremely well-known in the art (for example, a laptop with a

wireless LAN card) and hence, it would have been obvious to one of ordinary skill in the

art at the time of the invention was made to modify Thelen et al. to use wireless

computers, such as laptops or PDAs, in order to improve users' mobility around the

office.

Thelen et al. also do not disclose displaying to the user the results of coarse

word recognition and also the results of the comparison between coarse and detailed

recognitions. However, as mentioned above, Thelen et al. does disclose a client station

which is a general type computer; hence, it necessarily includes a display (desktop, Col.

6, lines 41-45). The examiner takes the official notice that the process of displaying the

recognition results on a computer screen is extremely well-known in the art of speech

recognition (since most of the desktop-based speech recognition programs, such as

Dragon's Naturally Speaking, tend to be used for word-processing or command entry,

they usually display the recognized text within the word-processing program or the Web

browser).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify Thelen et al. to display the coarse recognition

results and the results of coarse/detailed recognition comparison on the user's display

because this is well-known in the art and would generally enable the user to view and

verify the results of the speech recognition, hence increasing the overall usability and

reliability of the system.

As per claim 2, Thelen et al. disclose a server use for detailed recognition which

is separate from the client's computer device. (720, FIG. 7)

As per claim 3, Thelen et al. disclose :

- Transferring user input from client device to another computing system (760-770, FIG. 7)

- And transferring detailed result from computing system to client device (785-790, FIG. 7)

As per claim 4, Thelen et al. disclose a local speech recognizer which detects specific keywords and forwards user's input to the appropriate server based on the interpretation of the keywords (Col 8, lines 36-48). The local recognizer then implicitly sends the recognition results to the server (in a form of recognized results) because it needs this information in order to route the data to the appropriate server, while the server needs this data in order to identify local recognizer.

Alternatively, sending the results of local speech recognition to the server simplifies the recognition process on the server (Col. 9, lines 20-35)

As per claim 5, Thelen et al. do not disclose using a wireless link.

However, Thelen et al. disclose using devices, such as laptops and PDAs, which suggest wireless connectivity. In addition, Thelen et al. disclose using a network between the client and the server stations (710, FIG. 7). The examiner takes the official notice that wireless networks are extremely well-known in the art.

Hence, it would have been obvious to one of ordinary skill in the art at the time

of the invention was made to modify Thelen et al. to use a wireless network for

transferring data between client/server stations in order to improve users' mobility

around the office, if the user were to use a wireless device, such as a PDA or a laptop.

As per claims 6-7, Thelen et al. do not disclose that detailed recognition is

performed as a background process on the client's device.

However, Thelen et al. teach a system a client-server system interconnected by

a network (FIG. 7). As it is well-known in the art of telecommunications, client-server

systems are usually described in terms of the independent software processes rather

than separate physical nodes. For example, a single workstation can act as both a client

and a server at the same time by concurrently running both processes. It is also well-

known that a standard TCP/IP stack will allow the processes running on the same

machine to communicate with each other as if they were separated by a physical

communication network via a TCP connection. In that sense, the network in Thelen et

al. implies logical connectivity using the standard network communication protocol

(TCP/IP). In addition, any system supporting concurrent processes (which are anyway

required for client-server systems) would allow the placing of running processes in the

background. For example, this is done by using "bg" command in Unix and through

priority assignments in Windows NT's Task Manager.

For the above reasons, the examiner takes the official notice that it is well-known

in the art that the standard client-server systems are not limited to the physically disjoint

devices and can be easily implemented on the same machine, especially if that

machine has multiple processors. In addition, the examiner further takes the official

notice that it is well-known in the art that a machine with an operating system supporting

multiple processes (Windows NT, Unix) necessarily supports a way of placing these

processes in the background/foreground for performance reasons (for example,

processes not limited in time are usually placed in the background, while "real-time"

processes are running in the foreground).

Consequently, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify Thelen et al. to use a single device to run both

coarse and detailed recognitions concurrently, so as to improve the accuracy of the

recognition by using a detailed process running in the background (server), while also

providing the user with an essentially "real-time" performance based on the recognition

result of the coarse process (local client) (Col. 3, lines 5-14). As the server in Thelen et

al. provides an accurate result after the initial result of the local client (Col. 3, lines 9-

11), the modified system of Thelen et al. will achieve the same result because the

background server process running on the machine will produce a more accurate, but a

delayed recognition result.

As per claim 8, Thelen et al. disclose coarse (client) and detailed (server) speech

recognition processes (750, 780, FIG. 7)

As per claims 9-10, Thelen et al. do not disclose user-input data being handwritten or image data. Thelen et al. only discloses a speech recognition system which utilizes two-tiered, client-server recognition approach (FIG. 7) which achieves the reduction of processing load on the client device by off-loading some of the more complicated jobs to the server.

Additionally, the examiner takes the official notice that it is well-known in the art that both handwriting and image recognition are particular applications within a field known as "pattern recognition." Consequently, the techniques used for speech recognition are also used across the field for image and handwriting recognition (See Morton Nadler, Eric Smith, "Pattern Recognition Engineering," page 12)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method of two-tier, client-server processing disclosed Thelen et al. to other pattern recognition applications, such as image and handwriting recognition, in order to reduce the processing load on the client devices by utilizing the resources of a specialized recognition server.

As per claim 11, Thelen et al. do not explicitly disclose that client processing is constrained by time/computing resources. However, Thelen et al. disclose an embodiment where user's input is recognized in "real time." (Col. 3, lines 8-9). The examiner takes the official notice that it is well-known to ones skilled in the art that "real-time" recognition processing necessarily imposes constraints on processing time and computing resources. The fact that recognition is done in "real time" implies that it must

performed "right now", i.e. within the time boundaries normally used during human-to-human conversations, which inherently places constraints on the time allowed for the processing of each utterance. In addition, because speech recognition is a computationally expensive process, it is naturally constrained, at least in some form, in its use of the computational resources when the recognition is performed in "real time." In fact, every software process is constrained by the "computing resources" because it is the hardware that usually limits the computational power of a machine (RAM, disk space, etc).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made that the method of Thelen et al. places time and computational constraints on the client computer (coarse recognition), as it is well-known in the art that any "real-time" processing is necessarily limited by time and computational resources because of the "real-time" (almost immediate response time) requirement.

As per claim 12, Thelen et al. disclose the following limitations:

- A device accessing user input (740, FIG. 7) which performs coarse recognition (local recognizer, Col. 3, lines 1-3)

- A data link between the device and another computing device (network, 710, FIG. 7)

- Another computing system (720, FIG. 7) which performs detailed recognition (remote recognizer, Col. 3, lines 1-3) and returns results to user device (785-790, FIG. 7)

Thelen et al. do not disclose that a client station is a mobile device. However, Thelen et al. does disclose that a client station is a general type computer, including laptops, PDAs, etc (Col. 9, lines 63-65). The examiner takes the official notice that wireless computers are extremely well-known in the art (for example, a laptop with a wireless LAN card) and hence, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Thelen et al. to use wireless computers, such as laptops or PDAs, in order to improve users' mobility around the office.

As per claims 13, 17, Thelen et al. do not explicitly disclose that client processing is constrained by time and server processing is not constrained by time.

However, Thelen et al. disclose an embodiment where user's input is recognized in "real time." (Col. 3, lines 8-9). The examiner takes the official notice that it is well-known to ones skilled in the art that "real-time" recognition processing necessarily imposes constraints on processing time and computing resources. The fact that recognition is done in "real time" implies that it must performed "right now", i.e. within the time boundaries normally used during human-to-human conversations, which inherently places constraints on the time allowed for the processing of each utterance.

In addition, Thelen et al. disclose that a server recognition results are later provided for comparison with the "initial" results of the local recognizer (Col. 3, lines 9-11). Because of the inherent network delay (710, FIG. 7) and the additional processing time required for recognition using complex models/larger vocabulary (Col. 3, lines 4-5), the server side would not be able to participate in "real-time" recognition of user's input. As a result, the server's response time is not constrained by time in the same sense as the "real-time" local recognizer on the client (server's result necessarily arrives after client's result, see FIG. 7)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made that the method of Thelen et al. places time constraints on the client side's response time (coarse recognition) and no time constraints on the server side's response time (detailed recognition), as it is well-known in the art that any "real-time" processing (client side) is necessarily limited by time. Also, since the server side cannot support true "real-time" processing, it is not limited by time in the same sense as the client side.

As per claims 14, 19, Thelen et al. disclose performing comparison between coarse and detailed results (selector makes the final choice between local and remote recognizers, Col. 3, lines 10-13)

Thelen et al. do not disclose displaying to the user the results of coarse word recognition and also the results of the comparison between coarse and detailed recognitions. However, as mentioned above, Thelen et al. does disclose a client station

which is a general type computer; hence, it necessarily includes a display (desktop, Col.

6, lines 41-45). The examiner takes the official notice that the process of displaying the

recognition results on a computer screen is extremely well-known in the art of speech

recognition (since most of the desktop-based speech recognition programs, such as

Dragon's Naturally Speaking, tend to be used for word-processing or command entry,

they usually display the recognized text within the word-processing program or the Web

browser).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify Thelen et al. to display the coarse recognition

results and the results of coarse/detailed recognition comparison on the user's display

because this is well-known in the art and would generally enable the user to view and

verify the results of the speech recognition, hence increasing the overall usability and

reliability of the system.

As per claims 15,16, Thelen et al. do not explicitly disclose wired/wireless data

link.

However, Thelen et al. disclose network (710, FIG. 7) connecting client station

and server station. The examiner takes the official notice that both wired and wireless

data links are extremely well-known in the art to be used in communication networks.

As a result, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify Thelen et al. to use either wired or wireless

data links as part of the disclosed network (710, FIG. 7), as it is well-known in the art

and would allow the system to operate in both wireline and wireless environments.

As per claim 18, Thelen et al. disclose a local speech recognizer which detects

specific keywords and forwards user's input to the appropriate server based on the

interpretation of the keywords (Col 8, lines 36-48). The local recognizer then implicitly

sends the recognition results to the server (in a form of recognized results) because it

needs this information in order to route the data to the appropriate server, while the

server needs this data in order to identify local recognizer.

Alternatively, sending the results of local speech recognition to the server

simplifies the recognition process on the server (Col. 9, lines 20-35)

As per claim 20, Thelen et al. disclose:

- A client process accessing user input (740, FIG. 7) which performs coarse

  recognition (local recognizer, Col. 3, lines 1-3)

- A server process (720, FIG. 7) which performs detailed recognition

  (remote recognizer, Col. 3, lines 1-3) and returns results to user device

  (785-790, FIG. 7)

Thelen et al. do not disclose that detailed recognition is performed as a

background process on the client's device.

However, Thelen et al. teach a system a client-server system interconnected by

a network (FIG. 7). As it is well-known in the art of telecommunications, client-server

systems are usually described in terms of the independent software processes rather

than separate physical nodes. For example, a single workstation can act as both a client

and a server at the same time by concurrently running both processes. It is also well-

known that a standard TCP/IP stack will allow the processes running on the same

machine to communicate with each other as if they were separated by a physical

communication network via a TCP connection. In that sense, the network in Thelen et

al. implies logical connectivity using the standard network communication protocol

(TCP/IP). In addition, any system supporting concurrent processes (which are anyway

required for client-server systems) would allow the placing of running processes in the

background. For example, this is done by using "bg" command in Unix and through

priority assignments in Windows NT's Task Manager. Therefore, the examiner takes

the official notice that it is well-known in the art that the standard client-server systems

are not limited to the physically disjoint devices and can be easily implemented on the

same machine, especially if that machine has multiple processors. In addition, the

examiner further takes the official notice that it is well-known in the art that a machine

with an operating system supporting multiple processes (Windows NT, Unix)

necessarily supports a way of placing these processes in the background/foreground for

performance reasons (for example, processes not limited in time are usually placed in

the background, while "real-time" processes are running in the foreground).

Consequently, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify Thelen et al. to use a single device to run both

coarse and detailed recognitions concurrently, so as to improve the accuracy of the

recognition by using a detailed process running in the background (server), while also

providing the user with an essentially "real-time" performance based on the recognition

result of the coarse process (local client) (Col. 3, lines 5-14). As the server in Thelen et

al. provides an accurate result after the initial result of the local client (Col. 3, lines 9-

11), the modified system of Thelen et al. will achieve the same result because the

background server process running on the machine will produce a more accurate, but

delayed recognition result.

As per claims 21, 23, Thelen et al. do not explicitly disclose that client processing

(coarse recognition) is constrained by time and server processing (detailed background

recognition) is not constrained by time.

However, Thelen et al. disclose an embodiment where user's input is recognized

in "real time." (Col. 3, lines 8-9). The examiner takes the official notice that it is well-

known to ones skilled in the art that "real-time" recognition processing necessarily

imposes constraints on processing time and computing resources. The fact that

recognition is done in "real time" implies that it must performed "right now", i.e. within

the time boundaries normally used during human-to-human conversations, which

inherently places constraints on the time allowed for the processing of each utterance.

In addition, Thelen et al. disclose that a server recognition results are later provided for

comparison with the "initial" results of the local recognizer (Col. 3, lines 9-11). Because

of the inherent computational delay (background process does not get an immediate

access to the required CPU resources) and the additional processing time required for

recognition using complex models/larger vocabulary (Col. 3, lines 4-5), the server

process would not be able to participate in "real-time" recognition of user's input. As a

result, the server's response time is not constrained by time in the same sense as the

"real-time" local recognizer on the client (server's result necessarily arrives after client's

result, see FIG. 7)

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made that the method of Thelen et al. places time constraints on the

client side's response time (coarse recognition) and no time constraints on the server's

response time (detailed recognition), as it is well-known in the art that any "real-time"

processing (client side) is necessarily limited by time. Also, since the server process

cannot support true "real-time" processing, it is not limited by time in the same sense as

the client process.

As per claims 22, 24, Thelen et al. disclose performing comparison between

coarse and detailed results (selector makes the final choice between local and remote

recognizers, Col. 3, lines 10-13)

Thelen et al. do not disclose displaying to the user the results of coarse word

recognition and also the results of the comparison between coarse and detailed

recognitions. However, as mentioned above, Thelen et al. does disclose a client station

which is a general type computer; hence, it necessarily includes a display (desktop, Col.

6, lines 41-45). The examiner takes the official notice that the process of displaying the

recognition results on a computer screen is extremely well-known in the art of speech

recognition (since most of the desktop-based speech recognition programs, such as

Dragon's Naturally Speaking, tend to be used for word-processing or command entry,

they usually display the recognized text within the word-processing program or the Web

browser).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to modify Thelen et al. to display the coarse recognition results and

the results of coarse/detailed recognition comparison on the user's display because this

is well-known in the art and would generally enable the user to view and verify the

results of the speech recognition, hence increasing the overall usability and reliability of

the system.

3.   Claims 25-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Thelen et al. in view of Perez-Mendez et al. (5,754,978)

As per claim 25, Thelen et al. disclose:

- A client process accessing user input (740, FIG. 7) which performs coarse

  recognition (local recognizer, Col. 3, lines 1-3)

- A data link between the device and another computing device (network,

  710, FIG. 7)

- A server process (720, FIG. 7) which performs detailed recognition

(remote recognizer, Col. 3, lines 1-3) and returns results to user device (785-790, FIG.

7). As it is well-known in the art of telecommunications, client-server systems are

usually described in terms of the independent software processes rather than separate

physical nodes. For example, a single workstation can act as both a client and a server

at the same time by concurrently running both processes. It is also well-known that a

standard TCP/IP stack will allow the processes running on the same machine to

communicate with each other as if they were separated by a physical communication

network via a TCP connection. In that sense, the network in Thelen et al. implies logical

connectivity using the standard network communication protocol (TCP/IP). In addition,

any system supporting concurrent processes (which are anyway required for client-

server systems) would allow the placing of running processes in the background. For

example, this is done by using "bg" command in Unix and through priority assignments

in Windows NT's Task Manager. For the above reasons, the examiner takes the official

notice that it is well-known in the art that the standard client-server systems are not

limited to the physically disjoint devices and can be easily implemented on the same

machine, especially if that machine has multiple processors. In addition, the examiner

further takes the official notice that it is well-known in the art that a machine with an

operating system supporting multiple processes (Windows NT, Unix) necessarily

supports a way of placing these processes in the background/foreground for

performance reasons (for example, processes not limited in time are usually placed in

the background, while "real-time" processes are running in the foreground).

Thelen et al. do not disclose an additional background (2rd) recognition process

running on the client device, producing 2nd recognition result. Thelen et al. teach using

2 instead of 3 recognition engines.

However, Peretz Mendez et al. teach a system where 3 recognition engines are

arranged to process user's input, the outputs of the recognition engines being compared

to each other using comparator (FIG. 7).

Consequently, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify Thelen et al. as taught by Perez-Mendez et al.

so as to further improve the accuracy of the recognition by using 3 recognition engines

(Col. 10, lines 56-61), one running on the remote server and two running on the client.

As per claims 26,28, 33, Thelen et al. do not explicitly disclose that client

processing (coarse recognition) is constrained by time and other server processing

(detailed background recognition and remote server recognition) are not constrained by

time.

However, Thelen et al. disclose an embodiment where user's input is recognized

in "real time." (Col. 3, lines 8-9).   The examiner takes the official notice that it is well-

known to ones skilled in the art that "real-time" recognition processing necessarily

imposes constraints on processing time and computing resources. The fact that

recognition is done in "real time" implies that it must performed "right now", i.e. within

the time boundaries normally used during human-to-human conversations, which

inherently places constraints on the time allowed for the processing of each utterance.

In addition, Thelen et al. disclose that server's recognition results (both background and remote) are later provided for comparison with the "initial" results of the local recognizer (Col. 3, lines 9-11). Because of the inherent computational delay (background process does not get an immediate access to the required CPU resources/ remote server incurs network delays) and the additional processing time required for recognition using complex models/larger vocabulary (Col. 3, lines 4-5), neither of the server processes would be able to participate in "real-time" recognition of user input. As a result, the servers' response times are not constrained by time in the same sense as the "real-time" local recognizer on the client (server's result necessarily arrives after client's result, see FIG. 7)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made that the method of Thelen et al. places time constraints on the client side's response time (coarse recognition) and no time constraints on the server's response time (detailed recognition via background process and remote server), as it is well-known in the art that any "real-time" processing (client side) is necessarily limited by time. Also, since neither of the server processes (both background and remote) support true "real-time" processing, they are not limited by time in the same sense as the client process.

As per claims 27, 29, and 34, Thelen et al. disclose performing comparison between coarse and detailed results (selector makes the final choice between local and remote recognizers, Col. 3, lines 10-13)

Thelen et al. do not disclose displaying to the user the results of coarse word

recognition and also the results of the comparison between coarse and detailed

recognitions (including the results of the secondary comparison between 2nd and 3rd

recognition results). However, as mentioned above, Thelen et al. does disclose that a

client station is a general type computer, which necessarily includes a display (desktop,

Col. 6, lines 41-45). The examiner takes the official notice that the process of displaying

of the recognition results on a computer screen is extremely well-known in the art of

speech recognition (since most of the desktop-based speech recognition programs,

such as Dragon's Naturally Speaking, tend to be used for word-processing or command

entry, they usually display the recognized text within the word-processing program or

the Web browser).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify Thelen et al. to display the coarse recognition

results and the results of coarse/detailed recognition (1st vs 2nd and 2nd vs 3rd)

comparison on the user's display because this is well-known in the art and would

generally enable the user to view and verify the recognition results of each of the

recognition stages (1st, 2nd ,and 3rd), hence increasing the overall usability of the system

and improving its accuracy.

As per claims 30-32, do not disclose user-input data being handwritten or image

data. Thelen et al. only discloses a speech recognition system which utilizes two-tiered,

client-server recognition approach (FIG. 7) which achieves the reduction of processing

load on the client device by off-loading some of the more complicated jobs to the server.

However, the examiner takes the official notice that it is well-known in the art that

both handwriting and image recognition are particular applications within a field known

as "pattern recognition." Consequently, the techniques used for speech recognition are

also used across the field for image and handwriting recognition (See Morton Nadler,

Eric Smith, "Pattern Recognition Engineering," page 12)

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention was made to modify the method of two-tier, client-server

processing disclosed Thelen et al. to other pattern recognition applications, such as

image and handwriting recognition, in order to reduce the processing load on the client

devices by utilizing the resources of a specialized recognition server.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Thelen et al. (6,526,380) teach a system with multiple parallel recognizers.

White et al. (6,408,272) teach a distributed voice recognition system.

Joost (6,327,568) teaches a distributed voice recognition system.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dmitry Brant whose telephone number is (703) 305-

8954. The examiner can normally be reached on Mon. - Fri. (8:30am - 5pm).

         If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Talivaldis Ivars Smits can be reached on (703) 306-3011. The fax phone

number for the organization where this application or proceeding is assigned is (703)

872-9306.

         Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to Tech Center 2600 receptionist whose telephone

number is (703) 305- 4700.

DB

9/1/04

SUSAN MCFADDEN
PRIMARY EXAMINER